

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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<b>Donato</b>	) States Patent and Trademark Office, on
	) this date:
Serial No.: 09/883,546	)
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Filed: June 18, 2001	) March 17, 2010
	)
For: "Methods of Prompting	)
Audience Members in an Audience	)
Member Identification System"	)
	) <u><b>/Chad A. Pahnke/</b></u>
Group Art Unit: 2424	) Chad A. Pahnke
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Examiner: Annan Q. Shang	) Agent for Applicant

**AMENDED BRIEF ON APPEAL**

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Alexandria, VA 22313-1450

Sir:

This amended brief on appeal is being filed in response to the Notice of Non-Compliant Appeal Brief mailed on February 26, 2010. In the Notice, the Office noted that the brief did not satisfy the requirements of 37 C.F.R. § 41.37(c)(1)(iii) because the brief did not contain a statement of the status of all of the claims. In particular, the brief did not contain a statement that claims 1-2, 6-9, 13, 24-36, 39-40, 42-47, 49-53, 55, 65-66, 70-75, 79-81, 91-95, 98, 102, 113, 116-117, 121, 123, 132, and 182-193 are canceled. The Notice further noted that the Appeal Brief should only contain the headings required under 37

C.F.R. 41.37. By way of this response, the applicants resubmit an amended brief including an amended Status of the Claims section and omitting headings not required under 37 C. F.R. § 41.37. Therefore, this submission is believed to place the brief on appeal in compliance with all requirements outlined in 37 C.F.R. § 41.37(c).

**I. Real Party In Interest**

The above-referenced patent application has been assigned to The Nielsen Company (US), LLC, which is the real party in interest to this appeal, by Nielsen Media Research, LLC. The assignment has been recorded in the United States Patent and Trademark Office (“PTO”) at Frame 0245 of Reel 023030. The above-referenced patent application was previously assigned to Nielsen Media Research, LLC, by the inventor, Paul Donato. The assignment to Nielsen Media Research has been recorded in the United States PTO at Frame 0698 of Reel 012239.

**II. Related Appeals and Interferences**

There are no related appeals or interferences.

**III. Status of the Claims**

Currently, claims 3-5, 10-12, 14-23, 37-38, 41, 48, 54, 56-64, 67-69, 76-78, 82-90, 96-97, 99-101, 103-112, 114-115, 118-120, 122, 124-131, 133, and 194-212 are pending in this application. Claims 134-181 have been withdrawn. Claims 1-2, 6-9, 13, 24-36, 39-40, 42-47, 49-53, 55, 65-66, 70-75, 79-81, 91-95, 98, 102, 113, 116-117, 121, 123, 132, and 182-193 are canceled. The pending claims are presented in Appendix A to this brief. Claims 3-5, 10-12, 14-23, 37-38, 41, 48, 54, 56-64, 67-69, 76-78, 82-90, 96-97, 99-101, 103-112, 114-115, 118-120, 122, 124-131, 133, and 194-212 are rejected and form the subject matter of this appeal.

**IV. Status of the Amendments**

The applicants submitted an after-final amendment on March 23, 2009, canceling claims 182-193. The advisory action dated April 17, 2009, does not indicate the status of the after-final amendment or whether the amendment has been entered by the Examiner. For the purpose of this appeal brief, the applicant will treat the amendment canceling claims 182-193 as entered.

**V. Summary of the Claimed Subject Matter**

Although reference numerals and specification citations are inserted below in accordance with 37 C.F.R. § 41.37(c), these reference numerals and specification citations are merely examples of where support may be found in the specification for the terms used in this section of the brief. There is no intention to suggest that the terms of the claims are limited to the examples in the specification. As demonstrated by the reference numerals and specification citations below, the claims are fully supported by the specification as required by law. Nevertheless, it is improper to read limitations from the specification into the claims. Pointing out specification support for the claim terminology, as is done here to comply with 37 C.F.R. 41.37(c), does not limit the scope of the claims to those examples from which they derive support. Nor does this exercise provide a mechanism for circumventing the law precluding reading limitations into the claims from the specification. In sum, the reference numerals and specification citations are not to be construed as claim limitations nor are they to be used in any way to limit the scope of the claims.

Independent claim 194 is directed to a method. The method involves determining a count of audience members in an audience at a first location during a day part of a monitored day (e.g., 114); determining a first viewing count of a number of times that a first audience member was logged in to a measurement apparatus during the day part of one or more days prior to the monitored day (e.g., 110 or 124; FIGS. 5-8; 21:21-22:3, 23:7-20, or 34:11-21); determining a second viewing count of a number of times that a second audience member was logged in to the measurement apparatus during the day part of the one or more days prior to the monitored day (e.g., 110 or 124; FIGS. 5-8; 21:21-22:3, 23:7-20, or 34:11-21); determining a first probability that the first audience member is in the audience based on the first viewing count and the second viewing count (e.g., 124; 35:1-10); comparing the first probability to a probability threshold (e.g., 126; 35:19-32); when at least one of the first probability traverses the probability threshold (e.g., 128; 36:13-17) or the count is not equal to a number of audience members that are logged in to the measurement apparatus at the first location (e.g., 122; 33:16-18), presenting a prompt for user identification (e.g., 116; 34:4-6); and storing an identification of at least one of the audience members (e.g., 108; 21:21-22:2).

Independent claim 200 is directed to an article of manufacture including machine readable instructions which, when executed, cause a machine to: determine a count of audience members in an audience at a first location during a day part of a monitored day (e.g., 114); determine a first viewing count of a

number of times that a first audience member was logged in to the measurement apparatus during the day part of one or more days prior to the monitored day (e.g., 110 or 124; FIGS. 5-8; 21:21-22:3, 23:7-20, or 34:11-21); determine a second viewing count of a number of times that a second audience member was logged in to the measurement apparatus during the day part of the one or more days prior to the monitored day (e.g., 110 or 124; FIGS. 5-8; 21:21-22:3, 23:7-20, or 34:11-21); determine a first probability that the first audience member is in the audience based on the first viewing count and the second viewing count (e.g., 124; 35:1-10); compare the first probability to a probability threshold (e.g., 126; 35:19-22); when at least one of the first probability traverses the probability threshold (e.g., 128; 36:13-17) or the count is not equal to a number of audience members that are logged in to the measurement apparatus at the first location (e.g., 122; 33:16-18), present a prompt for user identification (e.g., 116; 34:4-6); and store an identification of at least one of the audience members (e.g., 108; 21:21-22:2).

Independent claim 206 is directed to a measurement apparatus including a memory (e.g., 56 and 58) and a processor coupled to the memory (e.g., 52). The processor is programmed to determine a count of audience members in an audience at a first location during a day part of a monitored day (e.g., 90); determine a first viewing count of a number of times that a first audience member was logged in to the measurement apparatus during the day part of one or more days prior to the monitored day (e.g., 110 or 124; FIGS. 5-8; 21:21-

22:3, 23:7-20, or 34:11-21); determine a second viewing count of a number of times that a second audience member was logged in to the measurement apparatus during the day part of the one or more days prior to the monitored day (e.g., 110 or 124; FIGS. 5-8; 21:21-22:3, 23:7-20, or 34:11-21); determine a first probability that the first audience member is in the audience based on the first viewing count and the second viewing count (e.g., 124; 35:1-10); compare the first probability to a probability threshold (e.g., 126; 35:19-22); present a prompt for user identification (e.g., 116; 34:4-6) when at least one of the first probability traverse the probability threshold (e.g., 128; 36:13-17) or the count is not equal to a number of audience members that are logged in to the measurement apparatus at the first location (e.g., 122; 33:16-18); and store an identification of at least one of the audience members (e.g., 108; 21:21-22:2).

Independent claim 212 recites a method including: storing a first audience identification information for one or more audience members in an audience of a program being viewed at a first location during a first day part (e.g., 108; 21:21-22:2); determining if a predetermined interval has passed after which to make a prompting decision (e.g., 112; 28:17-29:2); determining a count of audience members present in the audience and a number of audience members associated with the stored audience identification information in response to determining the predetermined interval has passed (e.g., 114; 31:3-20); determining an expected number of audience members based on historical tuning information for known audience members during corresponding day

parts in response to determining that the count of audience members is equal to the number of audience members associated with the stored audience information (e.g., 118; 31:21-33:9); determining whether the expected number of audience members is greater than a first threshold in response to determining the expected number (120; 33:10-14); determining a first probability that a first audience member is in the audience based on historical tuning information of the first audience member for the corresponding day parts and determining a second probability that a second audience member is in the audience based on historical tuning information of the second audience member for the corresponding day parts in response to the expected number being greater than the first threshold (e.g., 124; 34:7-35:18); determining that the first probability is greater than the second probability (e.g., 124 and 126; 34:16-21); determining whether the first probability is greater than a second threshold in response to determining that the first probability is greater than the second probability (e.g., 126; 35:19-22); determining whether the first audience member is one of the audience members associated with the stored audience identification information based on the first probability being greater than the threshold (e.g., 128; 36:11-17); suppressing an identification prompt based on whether the first audience member is one of the audience members associated with the stored audience identification information (e.g., 130; 37:3-8); and prompting the audience for a second audience identification information in response to failing to suppress the identification prompt (e.g., 116;36:17-37:2).



**VI. Grounds of Rejection to be Reviewed on Appeal**

The rejections of claims 3-5, 10-12, 14-23, 37-38, 41, 48, 67-69, 76-78, 82-90, 96-97, 99-101, 105-112, 114-115, 118-120, 122, 126-131, 133, and 194-212 under 35 U.S.C. §103 as unpatentable over Williams et al. (US 5,945,988) in view of Maissel et al. (US 2003/0088872).

The rejections of claims 54, 56-64, 103-104, and 124-125 under 35 U.S.C. § 103 as unpatentable over Williams et al. in view of Maissel et al. and Eldering et al. (US 6,457,010).

**VII. Argument**

**A. The rejections of claims 3-5, 10-12, 14-23, 37-38, 41, 48, 67-69, 76-78, 82-90, 96-97, 99-101, 105-112, 114-115, 118-120, 122, 126-131, 133, and 194-212 under 35 U.S.C. §103 as unpatentable over Williams et al. (US 5,945,988) in view of Maissel et al. (US 2003/0088872).**

In response to the non-final Office action mailed June 12, 2008, the applicants added new claims 194-212, which included independent claims 194, 200, 206, and 212. See *Resp. to the Office action mailed June 12, 2008*, pp. 29-33. The subsequent final Office action, mailed January 21, 2009, rejected claims 194-212 for the same reasons as claims 182-183. See *final Office action mailed January 21, 2009*, pp. 3-7. In response to the final Office action, the applicants noted that the rejection of claims 194-212 was improper, because claims 194-212 included different recitations than those found in claims 182-183. See *Resp. to final Office action mailed January 21, 2009*, p. 24.

The advisory action mailed April 17, 2009, reject all pending claims, and assert that all claim limitations were treated equally. See *advisory action mailed April 17, 2009, p. 3*. The applicants respectfully disagree for at least the following reasons: 1) claims 194, 200, 206, and 212 include recitations that are not present in claims 182-193 and were not treated in either the final Office action or the advisory action and, thus, it is improper for an office action to reject claims 194, 200, 206, and 212 as “properly treated and incorporat[ing] the claim limitations in claims 182-183;” 2) neither Williams nor Maissel teaches or suggests determining a first probability that an audience member is in the audience based on a first viewing count (i.e., a number of times that a first audience member was logged in to a measurement apparatus) and a second viewing count (i.e., a number of times that a second audience member was logged in to the measurement apparatus) (i.e., the probability one audience member is present is dependent on another audience member); 3) neither Williams nor Maissel teaches or suggests a count that is not equal to a number of audience members that are logged in to a measurement apparatus at a first location; and 4) neither Williams nor Maissel teaches or suggests determining an expected number of audience members based on historical tuning information for known audience members during corresponding day parts. Each of these reasons is more fully explained below.

1. The rejections of independent claims 194, 200, 206, and 212 are improper, because each of claims 194, 200, 206, and 212 include recitations not present in claims 182 or 183 that were

not addressed in either the final Office action or the advisory action.

It is well established that the prior art must teach or suggest each of the claim elements ... to establish a *prima facie* case of obviousness. See *In re Oetiker*, 24 USPQ, 2d 1443, 1446 (Fed. Cir. 1992); *Ex parte Clapp*, 227 U.S.P.Q. 972, 973 (Bd. Pat. App. 1985); *In re Royka*, 490 F.2d 981 (CCPA 1974); and M.P.E.P. § 2143. Additionally, the law has long been clear that the "disregard of claim limitations, as here, would render claim examination in the PTO meaningless." *Panduit Corp. v. Dennison Manufacturing Co.*, 1 U.S.P.Q. 2d. 1593, 1603 (Fed. Cir. 1987).

The final Office action and the advisory action both fail to address all claim elements of claims 194, 200, 206, and 212. See *final Office action mailed January 21, 2009, pp. 3-7* and *advisory action mailed April 17, 2009, p. 2*. Instead, the final Office action rejects claims 194-212 by addressing the recitations of claims 182 and 183 and then rejecting claims 194-212 by referencing the rejection of claims 182 and 183. See *final Office action, pp. 3-7*. Even after the applicants canceled claims 182-193 in response to the final Office action, the advisory action fails to reject claims 194, 200, 206, or 212 based on the recitations included therein. See *Resp. to final Office action mailed January 21, 2009, pp. 18, 24, and advisory action, p. 2*. This is clearly reversible error. Claims 194, 200, 206, and 212 each include a recitation that was not properly treated in either the final Office action or the advisory action.

For example, claims 194, 200, and 206 each recite, *inter alia*, determining a first probability that the first audience member is in the audience based on the first viewing count and the second viewing count. Additionally, claim 212 recites, *inter alia*, determining an expected number of audience members based on historical tuning information for known audience members during corresponding day parts, and determining whether the expected number of audience members is greater than a first threshold.

While the final Office action groups claims 182-212 together for the purposes of rejecting the claims under 35 U.S.C. § 103, both the final Office action and the advisory action are devoid of attention to the foregoing recitations. Therefore, the final Office action and the advisory action both fail to make a *prima facie* case of obviousness because both actions fail to show that the prior art teaches or suggests each and every recitation in any of claims 194, 200, 206, and 212. In view of the foregoing, the rejections of claims 194, 200, 206, and 212 are improper at least because a *prima facie* case of obviousness has not been made.

2. Claims 194, 200, and 206 are allowable over Williams and Maissel, because neither Williams nor Maissel teaches or suggests determining a first probability that an audience member is in the audience based on a first viewing count and a second viewing count.

Claim 194 recites, *inter alia*, determining a first probability that an audience member is in the audience based on a first viewing count and a second

viewing count. The final Office action cites Williams for describing the recitation. See *final Office action*, pp. 3-6.

The methods and apparatus described by Williams are directed to automatically determining and dynamically updating user preferences in an entertainment system. The system of Williams determines which user of multiple known users is using the system and configures system configuration settings based on the user preferences. See *Williams*, 5:8-36. The user preference information includes favorite programs, favorite channels, and typical watching periods, which can be programmed by prompting the user for feedback. See *Williams* 6:46-60. The system may store the user preference information locally or remotely. See *Williams*, 5:60-6:7. When the system is configured in accordance with the user preference information, the system locates programs that may be of interest to the user. See *Williams*, 7:63-8:42; 12:5-14.

To determine which single user of the multiple potential users is currently using the system, Williams populates a behavior log by monitoring user interactions with the system and current system settings. See *Williams*, 8:56-8:64. The behavior log details the channels, programs, and web pages that are viewed by users during individual time periods of each day. See *Williams*, 13:55-14:24. The system compares the information in the behavior log to the user preference information by 1) calculating a user metric for each user and the behavior log, and 2) comparing each user metric to the behavior log metric until

a match is found. See *Williams*, 8:64-9:30. To generate the metric, the system weights the various configurable options, calculates the values, and adds the values together. See *Williams*, 9:31-46. When comparing the user metric to the behavior log metric, if the user metric is greater than the behavior log metric, the system determines that the user is the current user of the system. See *Williams*, 9:46-63. The system can perform functions for any of the users that are not logged into the system. See *Williams*, 15:3-26.

However, Williams does not in any way teach or suggest determining a first probability that an audience member is in the audience based on a first viewing count and a second viewing count. The portion of Williams that comes nearest to describing this recitation is 8:64-9:63, in which Williams describes calculating a user metric for the information in a behavior log as well as the current system settings for each of the known system users. See *Williams*, 8:65-9:2. If there is a greater than predetermined probability that the information in the behavior log matches the user profile of one of the known users, the system of Williams determines that a match has been made. See *Williams*, 9:25-28. To generate the metric, each of the configurable options is given a different predetermined weight and the weighted values are added together. See *Williams*, 9:43-46. The sum of the weighted values is compared to a predetermined value, and the system determines that a match has been found if the sum of the weighted values is higher than the predetermined value. See *Williams*, 9:48-51.

The probability that a given user is using the system described in Williams is based completely on that single user's previous behavior and is not based on any other user's behaviors. See *Williams*, 9:22-63. Williams does not teach or suggest the user metric being based on another user's previous behavior. In contrast, claim 194 recites determining a first probability that an audience member is in the audience based on a first viewing count of a first audience member (i.e., a number of times a first audience member is logged in to a measurement apparatus during a day part of a monitored day as recited in claim 194) and a second viewing count of a second audience member (i.e., a number of times a second audience member is logged in to a measurement apparatus during a day part of a monitored day as recited in claim 194).

A non-limiting example of determining the first probability is described in the specification at page 35 in conjunction with FIGS. 4A, 4B, and 5-8. Specifically, the example computes the probability that a predicted person is in the audience by dividing the number of times the predicted person tuned into a program having the relevant SID class as the currently-watched program during the same day part by the "count" for that SID class and day part. See *specification*, 35:1-6. As illustrated in FIGS. 5-8, the "count" is the sum of the counts for all persons for a SID class and day part. See *id.* at 25:16-26:4. Thus, the probability for the predicted person is based on the number of views for that person, and the number of views for all other monitored persons (i.e., at least a

second person). In contrast, the probability described in Williams is based solely on the user for whom a probability is being calculated.

The applicants recognize that, according to Williams, a second user metric (i.e., probability that the second user is the system user) may be compared to the predetermined threshold if the first user metric does not exceed the threshold. See *Williams*, 9:25-30. However, the second user metric is still only based on the second user's previous behavior, and is not based on any other user behavior or metric. While the comparison of the user metric to the predetermined value may or may not be conditional on another user's probability being too low or too high, the probability is not based on any other user's probability or behavior. Therefore, Williams does not teach or suggest determining a first probability that an audience member is in the audience based on a first viewing count and a second viewing count. It is respectfully submitted that Maissel was not applied for this teaching and does not overcome the deficiency of Williams. Thus, claim 194 and all claims depending therefrom are allowable over Williams and Maissel. Claims 200 and 206 also include recitations similar to the recitation described above with respect to claim 194. For at least this reason, claims 200 and 206, and all claims depending therefrom, are also allowable over Williams and Maissel.

3. Claims 194, 200, and 206 are allowable over Williams and Maissel, because neither Williams nor Maissel teaches or suggests a count that is not equal to a number of audience members that are logged in to a measurement apparatus at a first location.



Claim 194 also recites a count that is not equal to a number of audience members that are logged in to a measurement apparatus at a first location. Williams does not teach or suggest audience counts at all, which is admitted by final Office action. See *final Office action*, p. 6. The final Office action puts forth Maissel to cure the admitted deficiency. *Id.*

Maissel describes displaying “a proportion of an audience viewing a program,” but does not describe comparing the count of audience members to the number of logged-in audience members at a first location. See *Maissel, paragraphs [0078]-[0080]*. Maissel defines “audience” as “the sum total audience viewing all programs at a particular time, or to the total audience of viewers who are capable of receiving programs at a particular time.” See *Maissel, paragraph [0246]*. Even if the system of Maissel did compare the proportion of an audience viewing the program (i.e., a “count of audience members,” the local/national audience viewing the program) to the number of logged-in audience members, the comparison would not be particularly useful because the comparison would almost always be way out of proportion.

However, Maissel also does not teach or suggest a count not equal to a number of audience members that are logged in to a measurement apparatus at a first location. Maissel describes viewer identification information obtained using methods well-known in the art, such as requiring viewers to input a PIN. See *Maissel, paragraph [0171]*. Maissel also describes computing real-time

information on a proportion or percentage of an audience viewing a particular program. See *Maissel, paragraph [0246]*. As discussed in *Maissel*, the system computes the proportion of a large audience watching a program and transmits the information to users. See *id.* The proportion of the audience includes the logged-in viewer data at a first location. See *Maissel, paragraphs [0243, 0246]*.

As used in *Maissel*, the count of audience members in an audience at a first location could never be different from the number of audience members logged in at the first location, and is therefore indistinguishable therefrom. At best, *Maissel* derives the count of audience members from the number of audience members logged in via PIN. See *Maissel, paragraphs [0171, 0246]*. As a result, the count of audience members will always be equal to the number of audience members logged in. *Maissel* cannot teach or suggest a count of audience members in an audience at a first location that is distinguishable from a number of audience members logged in at the first location, and certainly cannot teach or suggest performing an action when the count and the number of audience members logged in are different because the count and number of audience members logged in are never different.

In view of the above, no combination of *Williams* and *Maissel* can teach or suggest a count that is not equal to a number of audience members that are logged in to a measurement apparatus at a first location. For at least this additional reason, claim 194 and all claims depending therefrom are allowable over *Williams* and *Maissel*. Claims 200 and 206 each include a recitation

similar to the foregoing recitation of claim 194. Thus, claims 200 and 206, and all claims depending therefrom, are also allowable over Williams and Maissel for the same reason.

4. Claim 212 is allowable over Williams and Maissel, because neither Williams nor Maissel teaches or suggests determining an expected number of audience members based on historical tuning information for known audience members during corresponding day parts.

Claim 212 recites, *inter alia*, determining an expected number of audience members based on historical tuning information for known audience members during corresponding day parts. Williams is not concerned with an expected number of audience members present in an audience of a program, and certainly does not compare an expected number to a threshold. Rather, Williams is concerned with identifying a single active user and then activating that individual user's preferences. See *Williams*, 5:8-36. The advisory action asserts that the system of Williams does not determine a single user, and directs attention to Williams' description of monitoring and storing behavior logs for multiple users, and providing channel/programming suggestions to the user based on the behavior log. See *advisory action*, page 2. The applicants do not dispute that Williams describes a behavior log for multiple users and providing channel/programming suggestions to the user, but this description does not provide any teaching or suggestion for determining an expected number of audience members based on historical tuning information for known audience members during corresponding day parts, and determining whether the expected

number of audience members is greater than a first threshold. Additionally, a user's favorite times, channels, etc. (i.e., profile information), do not result in an expected number of audience members.

While Williams can provide background services for persons not currently using the system, only the preferences for one particular user may be operative at any given time. Additionally, Williams cannot be modified to expect a number of users, because Williams is directed to automatically determining and updating user preferences. See *Williams, Abstract*. Per Williams, sets of user preferences are mutually exclusive by definition, as identical user preferences would eliminate the need for defining the preferences of individual users and activating multiple sets of user preferences simultaneously would result in conflicts between settings. Thus, Williams is concerned with identifying one system user at a time because only one set of user preferences can be active at a time.

After identifying the user of the system, Williams is not concerned with identifying additional users, and thus does not count the number of audience members or expect such a number of audience members. Therefore, Williams does not teach, and cannot be modified to teach, determining an expected number of audience members based on historical tuning information for known audience members during corresponding day parts, and determining whether the expected number of audience members is greater than a first threshold.

Maissel does not overcome the deficiencies of Williams. Maissel describes displaying “a proportion of an audience viewing a program,” but the proportion of an audience is a determined number based on a wide audience as opposed to an expected number. See *Maissel*, [0078-0080]. Maissel does not teach or suggest determining an expected number of audience members and determining whether the expected number is greater than a first threshold. Therefore, no combination of Williams and Maissel can teach claim 212. For at least this reason, claim 212 is allowable over Williams and Maissel.

**B. The rejections of claims 54, 56-64, 103-104, and 124-125 under 35 U.S.C. §103 as unpatentable over Williams et al. (US 5,945,988) in view of Maissel et al. (US 2003/0088872) and Eldering et al. (US 6,457,010).**

Claims 54, 56-64, 103-104, and 124-125 are dependent on allowable claims and, thus, these rejections should be withdrawn.

**Conclusion**

In view of the foregoing, the applicants respectfully submit that all pending claims are in condition for allowance.

Respectfully submitted,

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**APPENDIX A**

1 - 2 (Cancelled)

3. (Rejected) A method as defined in claim 194, further comprising waiting for passage of a predetermined amount of time from a previous prompting decision.

4. (Rejected) A method as defined in claim 194, further comprising determining the program being viewed at the first location.

5. (Rejected) A method as defined in claim 194, further comprising prompting the audience member to enter the audience member identification upon detection that the receiver has been turned on.

6 - 9 (Cancelled)

10. (Rejected) A method as defined in claim 194, wherein the log of audience members identifies one or more additional audience members of the audience of the program.

11. (Rejected) A method as defined in claim 194, further comprising determining a second probability that the second audience member is in the audience based on the first viewing count and the second viewing count.

12. (Rejected) A method as defined in claim 11, wherein the first audience member is in the audience of the program during a first time interval, the second audience member is in the audience of the program during a second time interval, the second time interval at least partially overlapping the first time interval.

13. (Cancelled)

14. (Rejected) A method as defined in claim 194, further comprising:  
storing audience identification data in tables; and collapsing the tables if the  
tables contain insufficient data to make a prompting decision.

15. (Rejected) A method as defined in claim 14, wherein the collapsing  
of the tables is weighted depending upon age of the audience member  
identification data.

16. (Rejected) A method as defined in claim 194, wherein determining  
the probability that the audience member is in the audience of the program  
being viewed at the first location comprises determining a variable as a function  
of a number of times that the audience member has viewed programs at the first  
location and a number of times that the measurement apparatus was active.

17. (Rejected) A method as defined in claim 16, wherein the  
determination of the variable comprises determining the variable as a function  
of a number of times that the audience member has viewed programs at the first  
location during a predetermined day part and a number of times that a receiver  
was turned on during the predetermined day part.

18. (Rejected) A method as defined in claim 16, wherein the  
determination of the variable comprises determining the variable as a function  
of a number of times that the audience member has viewed programs at the first  
location during a predetermined day part over a predetermined amount of time  
and a number of times that a receiver was turned on during the predetermined



day part over the predetermined amount of time.

19. (Rejected) A method as defined in claim 16, wherein the determination of the variable comprises determining the variable as a function of a number of times that the audience member has viewed programs at the first location during a predetermined amount of time and a number of times that a receiver was turned on during the predetermined amount of time.

20. (Rejected) A method as defined in claim 16, wherein the determination of the variable comprises determining the variable as a function of a number of times that the audience member has viewed programs at the first location by a predetermined day part and by a SID and a number of times that a receiver was turned on by the predetermined day part and by the SID.

21. (Rejected) A method as defined in claim 16, wherein the determination of the variable comprises determining the variable as a function of a number of times that the audience member has viewed programs at the first location by a predetermined day part over a predetermined amount of time and by a SID and a number of times that the receiver was turned on during the predetermined day part over the predetermined amount of time and by the SID.

22. (Rejected) A method as defined in claim 16, wherein the determination of the variable comprises determining the variable as a function of a number of times that the audience member has viewed programs at the first location during a predetermined amount of time and by a SID and a number of times that the receiver was turned on during the predetermined amount of time

and by the SID.

23. (Rejected) A method as defined in claim 16, wherein the determination of the variable comprises determining the variable as a function of a number of times that the audience member has viewed programs at the first location by a SID and a number of times that the receiver was turned on by the SID.

24 – 36 (Cancelled)

37. (Rejected) A method as defined in claim 16, further comprising storing audience identification data in tables and collapsing the tables if the tables contain insufficient data to make a prompting decision.

38. (Rejected) A method as defined in claim 37, wherein the collapsing of the tables is weighted depending upon age of the audience member identification data.

39 - 40 (Cancelled)

41. (Rejected) The method of claim 16, further comprising prompting the audience member to enter the audience member identification when the variable is not equal to a current persons count and is greater than the threshold.

42 – 47 (Cancelled)

48. (Rejected) A method as defined in claim 194, wherein the first probability is based on a number of times that the audience member has viewed programs at the first location and a number of times that the audience measurement system was turned on

49 - 53 (Cancelled)

54. (Rejected) A method as defined in claim 194, further comprising applying a heuristic to determine the probability that the first audience member is in the audience of the program being viewed at the first location.

55. (Cancelled)

56. (Rejected) A method as defined in claim 54, further comprising applying the heuristic based upon a number of times that the first audience member viewed programs at the first location during a corresponding day part.

57. (Rejected) A method as defined in claim 54, wherein the application of a heuristic to determine whether the first audience member is in an audience of a receiver comprises determining a variable as a function of a number of times that the first audience member has viewed programs at the first location and a number of times that the measurement apparatus at the first location was turned on.

58. (Rejected) A method as defined in claim 57, wherein the determination of a variable comprises determining the variable as a function of a number of times that the first audience member was has viewed programs at the first location during a predetermined day part and a number of times that the measurement apparatus at the first location was turned on during the predetermined day part.

59. (Rejected) A method as defined in claim 57, wherein the determination of a variable comprises determining the variable as a function of

a number of times that the first audience member has viewed programs at the first location during a predetermined day part over a predetermined amount of time and a number of times that the measurement apparatus at the first location was turned on during the predetermined day part over the predetermined amount of time.

60. (Rejected) A method as defined in claim 57, wherein the determination of a variable comprises determining the variable as a function of a number of times that the first audience member has viewed programs at the first location during a predetermined amount of time and a number of times that the measurement apparatus at the first location was turned on during the predetermined amount of time.

61. (Rejected) as defined in method as defined in claim 57, wherein the determination of a variable comprises determining the variable as a function of a number of times that the first audience member has viewed programs at the first location by a predetermined day part and by a SID and a number of times that the measurement apparatus at the first location was turned on by the predetermined day part and by the SID.

62. (Rejected) A method as defined in claim 57, wherein the determination of a variable comprises determining the variable as a function of a number of times that the first audience member has viewed programs at the first location by a predetermined day part over a predetermined amount of time and by a SID and a number of times that the measurement apparatus at the first

location was turned on during the predetermined day part over the predetermined amount of time and by the SID.

63. (Rejected) A method as defined in claim 57, wherein the determination of a variable comprises determining the variable as a function of a number of times that the first audience member has viewed programs at the first location during a predetermined amount of time and by a SID and a number of times that the measurement apparatus at the first location was turned on during the predetermined amount of time and by the SID.

64. (Rejected) A method as defined in claim 57, wherein the determination of a variable comprises determining the variable as a function of a number of times that the first audience member has viewed programs at the first location by a SID and a number of times that the measurement apparatus at the first location was turned on by the SID.

65 - 66 (Cancelled)

67. (Rejected) A method as defined in claim 54, further comprising storing audience identification data in tables; collapsing the tables if the tables contain insufficient data to make a prompting decision.

68. (Rejected) A method as defined in claim 194, wherein the probability is based upon tuning history and tuning style.

69. (Rejected) A method as defined in claim 68, wherein the tuning style comprises at least one of tuning velocity, tuning acceleration, tuning velocity and tuning acceleration, or program clustering.

70 – 75 (Cancelled)

76. (Rejected) A method as defined in claim 68, further comprising:  
storing audience identification data in tables; and  
collapsing the tables if the tables contain insufficient data to make a  
prompting decision.

77. (Rejected) A method as defined in claim 194, further comprising  
determining the first probability based upon a tuning style;  
determining a variable as a function of a number of times that the  
audience member has viewed programs at the first location and a number of  
times that an audience measurement system at the first location was turned on;  
and

displaying a prompt to the audience member to enter the audience  
member identification if the variable is not greater than a second threshold and  
if the probability is not greater than the threshold.

78. (Rejected) A method as defined in claim 77, wherein the tuning  
style comprises at least one of tuning velocity, tuning acceleration, tuning  
velocity and tuning acceleration, or program clustering.

79 - 81 (Cancelled)

82. (Rejected) A method as defined in claim 77, wherein the  
determination of a variable comprises determining the variable as a function of  
a number of times that the first audience member has viewed programs at the  
first location during a predetermined day part and a number of times that the

measurement apparatus at the first location was turned on during the predetermined day part,

83. (Rejected) A method as defined in claim 77, wherein the determination of a variable comprises determining the variable as a function of a number of times that the first audience member has viewed programs at the first location during a predetermined day part over a predetermined amount of time and a number of times that the measurement apparatus at the first location was turned on during the predetermined day part over the predetermined amount of time.

84. (Rejected) A method as defined in claim 77, wherein the determination of a variable comprises determining the variable as a function of a number of times that the first audience member has viewed programs at the first location during a predetermined amount of time and a number of times that the measurement apparatus at the first location was turned on during the predetermined amount of time.

85. (Rejected) A method as defined in claim 77, wherein the determination of a variable comprises determining the variable as a function of a number of times that the first audience member has viewed programs at the first location by a predetermined day part and by a SID and a number of times that the measurement apparatus at the first location was turned on by the predetermined day part and by the SID.

86. (Rejected) A method as defined in claim 77, wherein the

determination of a variable comprises determining the variable as a function of a number of times that the first audience member has viewed programs at the first location by a predetermined day part over a predetermined amount of time and by a SID and a number of times that the measurement apparatus at the first location was turned on during the predetermined day part over the predetermined amount of time and by the SID.

87. (Rejected) A method as defined in claim 77, wherein the determination of a variable comprises determining the variable as a function of a number of times that the first audience member was has viewed programs at the first location during a predetermined amount of time and by a SID and a number of times that the measurement apparatus at the first location was turned on during the predetermined amount of time and by the SID.

88. (Rejected) A method as defined in claim 77, wherein the determination of a variable comprises determining the variable as a function of a number of times that the first audience member has viewed programs at the first location by a SID and a number of times that the measurement apparatus at the first location was turned on by the SID.

89. (Rejected) The method of claim 77 wherein the method is executed only after the passage of a predetermined amount of time from a previous prompting decision.

90. (Rejected) The method of claim 77 further comprising:  
initially displaying a prompt to the first audience member to enter the



audience member identification upon detection that the receiver has been turned on; and

executing the method only after the passage of a predetermined amount of time from the initial prompting.

91 - 95 (Cancelled)

96. (Rejected) An article of manufacture as defined in claim 200 wherein the machine readable instructions cause the machine to determine the first probability based on a number of times that the audience member has historically viewed programs at the first location.

97. (Rejected) An article of manufacture as defined in claim 96, wherein the machine readable instructions cause the machine to determine the first probability based on a number of times that the measurement apparatus at the first location has been turned on.

98. (Cancelled)

99. (Rejected) An article of manufacture as defined in claim 96, wherein the number of times that the audience member was historically in the audience of at first location and the number of times that the measurement apparatus at the first location has been turned on are based on the day part.

100. (Rejected) An article of manufacture as defined in claim 96, wherein the number of times that the audience member was historically in the audience of at the first location and the number of times that the measurement apparatus at the first location has been turned on are based on a source

identification (SID) code.

101. (Rejected) An article of manufacture as defined in claim 96, wherein the probability is based upon at least one of tuning style or tuning patterns.

102. (Cancelled)

103. (Rejected) An article of manufacture as defined in claim 200, wherein the machine readable instructions cause the machine to determine the first probability using a heuristic.

104. (Rejected) An article of manufacture as defined in claim 103, wherein the heuristic utilizes at least one of: a number of times that the audience member has viewed programs at the first location; a count of audience members; a number of logged in audience members; a predetermined day part; a predetermined program; a predetermined source identification (SID) code; a number of times that an audience measurement system at the first location is turned on; or whether the audience member is logged in.

105. (Rejected) An article of manufacture as defined in claim 200, wherein the machine readable instructions cause the machine to determine the first probability based upon tuning style.

106. (Rejected) An article of manufacture as defined in claim 105, wherein the machine readable instructions cause the machine to determine the first probability based on tuning history.

107. (Rejected) An article of manufacture as defined in claim 91,

wherein the machine readable instructions cause the machine to determine the first probability by computing a likelihood based upon past audience composition and tuning habits.

108. (Rejected) An article of manufacture as defined in claim 200 wherein the machine readable instructions cause the machine to suppress displaying a prompt to the audience if the first audience member has already entered the audience member identification.

109. (Rejected) An article of manufacture as defined in claim 200, wherein the machine readable instructions cause the machine to wait a pre-determined amount of time between prompting decisions.

110. (Rejected) An article of manufacture as defined in claim 109, wherein the machine readable instructions cause the machine to initially display a prompt to the audience to enter the audience member identification upon a detection that the measurement apparatus at the first location has been turned on,

111. (Rejected) An article of manufacture as defined in claim 200, wherein the machine readable instructions cause the machine to display a prompt or add the audience member to the log of audience members at intermittent prompting occasions.

112. (Rejected) An article of manufacture as defined in claim 111 wherein the intermittent prompting occasions are nominally separated from one another by a period  $T$ , and wherein the period  $T$  varies depending upon prior

responses to the prompting.

113. (Cancelled)

114. (Rejected) An article of manufacture as defined in claim 200,  
wherein the machine readable instructions cause the machine to:

store audience identification data in tables; and

collapse the tables if the tables contain insufficient data to make a  
prompting decision.

115. (Rejected) An article of manufacture as defined in claim 114  
wherein the collapsing of the tables is weighted depending upon age of the  
audience member identification data.

116 – 117 (Cancelled)

118. (Rejected) An apparatus as defined in claim 206, wherein the first  
probability is computed based upon a number of times that the first audience  
member has been in an audience at the first location during a corresponding day  
part.

119. (Rejected) An apparatus as defined in claim 206, wherein the  
processor is programmed to determine the first probability based on a number of  
times that the first audience member was historically in an audience at the first  
location.

120. (Rejected) An apparatus as defined in claim 119, wherein the  
processor is programmed to determine the first probability based on a number of  
times that the measurement apparatus at the first location has been turned on.

121. (Cancelled)

122. (Rejected) An apparatus as defined in claim 119, wherein the processor is programmed to determine the first probability based upon at least one of tuning style or tuning patterns.

123. (Cancelled)

124. (Rejected) An apparatus as defined in claim 206, wherein the processor is programmed to determine the first probability using a heuristic.

125. (Rejected) An apparatus as defined in claim 124, wherein the heuristic utilizes at least one of: a number of times that the first audience member has been in an audience at the first location; a count of audience members; a number of logged in audience members; a predetermined day part; a predetermined program; a predetermined source identification (SID) code; a number of times that an audience measurement system at the first location is turned on; or whether the first audience member is logged in.

126. (Rejected) An apparatus as defined in claim 206, wherein the processor is programmed to determine the first probability based upon tuning style.

127. (Rejected) An apparatus as defined in claim 206, wherein the processor is programmed to determine the first probability based upon audience composition and tuning habits.

128. (Rejected) An apparatus as defined in claim 206, wherein the processor is programmed to suppress presenting a prompt to the audience if the

audience has already entered the user identification.

129. (Rejected) An apparatus as defined in claim 206, wherein the processor is programmed to wait a pre-determined amount of time between prompting decisions.

130. (Rejected) An apparatus as defined in claim 206, wherein the processor is programmed to prompt or suppress the prompting at intermittent prompting occasions.

131. (Rejected) An apparatus as defined in claim 130, wherein the intermittent prompting occasions are nominally separated from one another by a period T, and wherein the period T varies depending upon prior responses to the prompting.

132. (Cancelled)

133. (Rejected) An apparatus as defined in claim 206, wherein the processor is programmed to:

store audience identification data in tables; and

collapse the tables if the tables contain insufficient data to make a prompting decision.

134 – 181. (Withdrawn)

182 – 193. (Canceled)

194. (Rejected) A method comprising:

determining a count of audience members in an audience at a first location during a day part of a monitored day;

determining a first viewing count of a number of times that a first audience member was logged in to a measurement apparatus during the day part of one or more days prior to the monitored day;

determining a second viewing count of a number of times that a second audience member was logged in to the measurement apparatus during the day part of the one or more days prior to the monitored day;

determining a first probability that the first audience member is in the audience based on the first viewing count and the second viewing count;

comparing the first probability to a probability threshold;

when at least one of the first probability traverses the probability threshold or the count is not equal to a number of audience members that are logged in to the measurement apparatus at the first location, presenting a prompt for user identification; and

storing an identification of at least one of the audience members.

195. (Rejected) A method as defined in claim 194, further comprising adding the first viewing count and the second viewing count to determine a total viewing count, wherein the first probability is based on the total viewing count.

196. (Rejected) A method as defined in claim 194, wherein storing an identification of at least one of the audience members comprises storing an identification of the first audience member.

197. (Rejected) A method as defined in claim 194, further comprising comparing the count of audience members to a number of audience members that are logged in to a measurement apparatus at the first location.

198. (Rejected) A method as defined in claim 194, wherein the first viewing count is based on the number of times that the first audience member was logged in to a second measurement apparatus at a second location.

199. (Rejected) A method as defined in claim 194, wherein the first viewing count is based on the number of times that the first audience member was logged in to the first measurement apparatus during exposure to a first program source.

200. (Rejected) An article of manufacture storing machine readable instructions which, when executed, cause a machine to:

determine a count of audience members in an audience at a first location during a day part of a monitored day;

determine a first viewing count of a number of times that a first audience member was logged in to the measurement apparatus during the day part of one or more days prior to the monitored day;

determine a second viewing count of a number of times that a second audience member was logged in to the measurement apparatus during the day part of the one or more days prior to the monitored day;

determine a first probability that the first audience member is in the audience based on the first viewing count and the second viewing count;



compare the first probability to a probability threshold;

when at least one of the first probability traverses the probability threshold or the count is not equal to a number of audience members that are logged in to the measurement apparatus at the first location, present a prompt for user identification; and

store an identification of at least one of the audience members.

201. (Rejected) An article of manufacture as described in claim 200, wherein the machine readable instructions cause the machine to add the first viewing count and the second viewing count to determine a total viewing count, wherein the first probability is based on the total viewing count.

202. (Rejected) An article of manufacture as described in claim 200, wherein storing an identification of at least one of the audience members comprises storing an identification of the first audience member.

203. (Rejected) An article of manufacture as described in claim 200, wherein the machine readable instructions cause the machine to compare the count of audience members to a number of audience members that are logged in to a measurement apparatus at the first location.

204. (Rejected) An article of manufacture as described in claim 200, wherein the first viewing count is based on the number of times that the first audience member was logged in to a second measurement apparatus at a second location.

205. (Rejected) An article of manufacture as described in claim 200, wherein the first viewing count is based on the number of times that the first audience member was logged in to the first measurement apparatus during exposure to a first program source.

206. (Rejected) A measurement apparatus, comprising:

a memory; and

a processor coupled to the memory and programmed to:

determine a count of audience members in an audience at a first location during a day part of a monitored day;

determine a first viewing count of a number of times that a first audience member was logged in to the measurement apparatus during the day part of one or more days prior to the monitored day;

determine a second viewing count of a number of times that a second audience member was logged in to the measurement apparatus during the day part of the one or more days prior to the monitored day;

determine a first probability that the first audience member is in the audience based on the first viewing count and the second viewing count;

compare the first probability to a probability threshold;

when at least one of the first probability traverses the probability threshold or the count is not equal to a number of audience members that are logged in to the measurement apparatus at the first location, present a prompt for user identification; and

store an identification of at least one of the audience members.

207. (Rejected) An apparatus as described in claim 206, wherein the processor is further programmed to add the first viewing count and the second viewing count to determine a total viewing count, wherein the first probability is based on the total viewing count.

208. (Rejected) An apparatus as described in claim 206, wherein storing an identification of at least one of the audience members comprises storing an identification of the first audience member.

209. (Rejected) An apparatus as described in claim 206, wherein the processor is further programmed to compare the count of audience members to a number of audience members that are logged in to a measurement apparatus at the first location.

210. (Rejected) An apparatus as described in claim 206, wherein the first viewing count is based on the number of times that the first audience member was logged in to a second measurement apparatus at a second location.

211. (Rejected) An apparatus as described in claim 206, wherein the first viewing count is based on the number of times that the first audience member was logged in to the first measurement apparatus during exposure to a first program source.

212. (Rejected) A method comprising:  
storing a first audience identification information for one or more audience members in an audience of a program being viewed at a first location

during a first day part;

determining if a predetermined interval has passed after which to make a prompting decision;

determining a count of audience members present in the audience and a number of audience members associated with the stored audience identification information in response to determining the predetermined interval has passed;

determining an expected number of audience members based on historical tuning information for known audience members during corresponding day parts in response to determining that the count of audience members is equal to the number of audience members associated with the stored audience information;

determining whether the expected number of audience members is greater than a first threshold in response to determining the expected number;

determining a first probability that a first audience member is in the audience based on historical tuning information of the first audience member for the corresponding day parts and determining a second probability that a second audience member is in the audience based on historical tuning information of the second audience member for the corresponding day parts in response to the expected number being greater than the first threshold;

determining that the first probability is greater than the second probability;

determining whether the first probability is greater than a second

threshold in response to determining that the first probability is greater than the second probability;

determining whether the first audience member is one of the audience members associated with the stored audience identification information based on the first probability being greater than the threshold;

suppressing an identification prompt based on whether the first audience member is one of the audience members associated with the stored audience identification information; and

prompting the audience for a second audience identification information in response to failing to suppress the identification prompt.

**EVIDENCE APPENDIX**

**None**

**RELATED PROCEEDINGS APPENDIX**

**None**